

Amendment dated March 2, 2006

Reply to Office Action of December 30, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A data communication control system in a mobile communication system, comprising:

a base station controller and switching system which identifies a type of an incoming call request requested by a calling party and determines an appropriate communication path so as to selectively provide a voice communication service or a data communication service based on the identified type of call request, and outputs data and signals which control call connection between the calling party and a called party through the determined communication path; and

a data control system which selectively modulates and demodulates data from said base station controller and switching system by performing protocol communication with said base station controller and switching system, wherein the data control system comprises:

a connection device to mobile data which provides a data path for signals and data transmission between a base station and the data control system; and

a connection device to public network data which connects a public network of the data control system with a public network of the base station controller and switching system

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and sets a data traffic path between the data control system and the base station controller and switching system, and wherein the calling party is connected to the called party through a channel source provided between the base station controller and switching system and the connection device to the public network data and, wherein an appropriate communication network path is set based on this connection state.

2. (Original) The data communication control system of claim 1, wherein at least one of the calling party and the called party includes a data terminal which outputs predetermined data, and a communication device connected with the data terminal which transmits the data on a wireless or wire communication network.

3. (Previously Presented) The data communication control system of claim 1, wherein said data control system further comprises:

a data processing device which performs protocol communication with the base station and selectively modulates and demodulates input data to provide the modulated or demodulated data to the called party or the calling party; and

a main processing device which assigns a resource of said data control system and identifies the state of the resource in response to a data call request of the base station.

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4. (Original) The data communication control system of claim 3, further comprising a switching device which switches and controls the resources assigned to said data processing device and said connection device to public network data by a control signal of said main processing device.

5-6. (Cancelled)

7. (Original) The data communication control system of claim 1, wherein said data control system identifies the transmission state of said base station controller and switching system and transmits a message which controls an amount of the data to be transmitted to said base station controller and switching system.

8-9. (Cancelled)

10. (Original) A method for controlling a data communication between a calling party and a called party in communication system having a base station controller and switching system, a connection device to mobile data for providing a data path for signals and data transmission between the mobile station and the data control system, a connection device to public network data for connecting a public network of the data control system with a public

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network of the base station controller and switching system and setting a data traffic path between the data control system and the switching system, a data processing device for performing protocol communication with the mobile station and selectively modulating and demodulating input data to provide the modulated or demodulated data to the called party or the calling party, and a main processing device for assigning a resource of the data control system and identifying the state of the resource in response to a data call request of the mobile station, and providing various information for system control to the system user, the method comprising the steps of:

informing arrival of a call setting request message from the base station controller and switching system to the main processing device in response to a call request signal of the calling party;

identifying a type of a call by the main processing device and assigning a modem resource suitable for the type of the call;

performing protocol communication between the data processing device and the calling party using link resources provided between the base station controller and switching system and the connection device to mobile data;

connecting to the called party through a channel resource provided between the base station controller and switching system and the connection device to the public network data, and setting a communication network path based on the connection state; and

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performing data communication between the calling party and the called party through the communication path.

11. (Original) The method for controlling a data communication of claim 10, wherein the step of setting the communication path further comprises the steps of:

requesting a path setting request message in the base station controller and switching system by the connection device to public network data; and
connecting to the public network by the base station controller and switching system and informing the main processing device of the connection result through the connection device to public network data.

12. (Original) The method for controlling a data communication of claim 10, wherein the step of setting the communication network path further comprises the steps of:

requesting a path setting request message in the connection device to the public network data by the base station controller and switching system; and
setting a data path of the connection device to the public network data and the data processing device by the connection device to a public network using a channel resource of the set data processing device.

13. (Original) The method for controlling a data communication of claim 10, wherein the step of setting the communication path further comprises the steps of:

requesting a path setting request message in the base station controller and switching system by the connection device to public network data;

connecting to the public network of the base station controller and switching system and informing the main processing device of the connection result through the connection device to public network data;

requesting a path setting request message in the connection device to the public network data by the base station controller and switching system; and

setting a data path of the connection device to public network data and the data processing device using a channel resource of the set data processing device by the connection device to public network data.

14. (Original) The data communication control system of claim 3, wherein said main processing device further provides system control information to a system user.

15. (Original) The data communication control system of claim 1, wherein said base station controller and switching system further comprises:

a selector vocoder controller;

a data communication radio link protocol unit; and
a vocoder.

16. (Original) The data communication control system of claim 15, wherein said selector vocoder controller further comprises a buffer having a size of 21 bytes, and a queue comprised of 265 entries.

17. (Original) The method for controlling a data communication of claim 11, wherein the calling party is a mobile station and the called party is a land station.

18. (Original) The method for controlling a data communication of claim 12, wherein the calling party is a land station and the called party is a mobile station.

19. (Original) The method for controlling a data communication of claim 13, wherein the calling party and the called party are mobile stations.

20. (Original) The data communication control system of claim 2, wherein the communication device is one of a modem and a mobile telephone.

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21. (Original) The data communication control system of claim 1, further comprising a base station coupled to said base station controller and switching system; and a public network coupled to said base station controller and switching system.

22. (Original) The data communication control system of claim 21, further comprising a mobile telephone which transmits and receives data signals to and from said base station; and

a first personal computer coupled to said mobile telephone by a serial input/output port.

23. (Original) The data communication control system of claim 22, further comprising a modem coupled to said public network; and a second personal computer coupled to said modem.

24. (Original) The data communication control system of claim 3, wherein said data processing device further comprises:

a main controller coupled to said main processing device;

a protocol processor which transmits and receives mobile data;

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a modem processor which transmits and receives data to and from the public network; and

an application interface controller coupled to said main controller which interfaces data between said protocol processor and said modem processor.

25. (Previously Presented) The data communication control system of claim 24, wherein said protocol processor further comprises:

a transmission controller coupled to said application interface controller;
an inter-terminating point link controller, which builds a protocol stack;
a transmission interrupting unit, which transmits data from a public network subscriber to a mobile communication subscriber;

a reception interrupting unit, which transmits data from the mobile communication subscriber to the public network subscriber;

a transmission frame forming or releasing part, which forms or releases a frame of transmission/receiving data; and

a selector vocoder control module (SVCM), which manages signaling with a selector vocoder of said base station controller and switching system.

26-34. (Canceled)

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35. (Previously Presented) A data communication control system in a mobile communication system, comprising:

a base station controller and switching system which determines a communication path which selectively provides a voice communication service or a data communication service in response to a call request requested by a calling party, and outputs data and signals which control call connection between the calling party and a called party through the determined communication path; and

a data control system which selectively modulates and demodulates data from said base station controller and switching system by performing protocol communication with said base station controller and switching system,

wherein a format of a data frame used for communication between said base station controller and switching system and said data control system comprises a first field which provides information required for said base station controller and switching system, a second field which provides information required for communication between said base station controller and switching system and said data control system, a third field which provides transmission data and control information during data communication between said base station controller and switching system and said data control system, and a fourth field which represents an end of the transmission data.

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36. (Previously Presented) The data communication control system of claim 35, wherein said third field comprises:

a fifth field which represents a transmission type of data sent to a radio period;
a sixth field which represents a traffic information type;
a seventh field which represents a control signal code; and
an eighth field which represents a control number of the data frame.

37-45. (Canceled)